



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,156	08/09/2001	Joseph E. Algieri	10006369-1	3994

7590 09/20/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CRAIG, DWIN M

ART UNIT PAPER NUMBER

2123

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,156

Applicant(s)

ALGIERI ET AL.

Examiner

Dwin M. Craig

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-24 and 26-31 have been presented for reconsideration in view of Applicants' amended claim language and arguments. Claim 25 has been cancelled.
2. Dwain Craig is now the Examiner of record. Eduardo Garcia-Otero is no longer the Examiner of record.

Response to Arguments

3. Applicants' arguments presented in the 5-25-2005 responses have been fully considered. The Examiner's response is as follows.

- 3.1 Regarding the Applicants' response to the 35 USC § 112 Second Paragraph rejections of claims 1 and 2, Applicant argued, *on page 8 of the 5-25-2005 responses*,

[In response, the applicants have clarified claims 1 and 2. More particularly, "the storage system" is deleted from claim 1. Thus, claim 1 is directed to a method of assigning resources to for a computer design. Claim 2 further limits claim 1 by reciting that the computer system design comprises a design for a data storage system.]

The Examiner has found this argument persuasive and withdraws the previous 35 USC § 112 Second Paragraph rejections of claims 1 and 2.

- 3.2 Regarding the Applicants' response to the 35 USC § 112 First Paragraph rejections of claims 1-31, Applicants' argued, *on page 9 of the 5-25-2005 responses*,

[The premise upon which the rejection is based, i.e. that the claims are directed toward an "expert system", is not correct. This is apparent because the claims do not recite an expert system, knowledge base, or an inference engine; however, according to the definition of "expert system" quoted in the office action, all of these elements are required for an expert system.]

The Examiner has found this argument persuasive and withdraws the previous 35 USC § 112 First Paragraph rejections of claims 1-31.

3.3 Regarding the Applicants' response to the 35 USC § 102 rejections of claims 1-5, 10-16, 21-22 and 23-27, Applicants' argued, *on page(s) 15 and 16 of the 5-25-2005 responses,*

[For example, Smith does not disclose receiving desired levels of performance parameters from a user via a user interface.]

And

[Because Smith does not suggest or disclose receiving desired performance parameters from a user, Smith also cannot disclose modifying an existing design based on received desired performance parameters. Smith also does not suggest or disclose that the design might include assignments of system resources to applications. Further, Smith does not disclose predicting levels of performance parameters for such a modified design.]

And, on page 16,

[The ASICs and FPGAs of Smith are not data storage systems. Smith also does not teach that HDL tools could be applied to the design of a data storage system, not to the design of a data storage system that includes assignments of system resources to applications.]

The Examiner has found Applicants' arguments to be persuasive, however, the Examiner would like to respond to a certain portion of Applicants' arguments. The Examiner respectfully points out that ASIC's and FPGA's can be used as "data storage systems" for example an ASIC that acts as a MAC controller for an Ethernet device will have a transmit and receive buffer, and an FPGA design can contain storage memory cells in the design for buffering of data, etc... So, HDL tools could be used to design data storage systems. Applicant's invention, as disclosed on page 1 of the specification, is directed towards RAID arrays, although the current claim language is broad enough to include solid state storage arrays, such as SRAM or FLASH memory, the Examiner notes that Applicants' specification discloses that solid state memory in combination

Art Unit: 2123

with RAID arrays and/or disk storage are what is *defined* as “*data storage systems*”. The Examiner withdraws the earlier 35 USC § 102 and 35 USC § 103 rejections of claims 1-31.

3.4 As updated search has revealed new art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-24 and 26-31 are rejected under 35 USC § 102(e) as being unpatentable over US Patent 6,487,562 Mason, Jr. et al., hereafter referred to as *Mason*.

4.1 Regarding independent claims 1, 10 and 23 and using independent claim 1 as an example, the *Mason* reference discloses, *A method of assigning resources for a computer system design comprising: (Col. 1 line 66, “The present invention provides a system and method for dynamically modifying parameters in a data storage system.”) receiving desired levels of performance parameters for a computer system design from a user via a user interface to a computer system, (Figure 2 Item 40 and Col. 2 lines 21-31), the design including assignments of system resources to applications; (Col. 5 line 33, “A User Interface (UI) 40 application which allows a user to modify the QOS (Quality of Service) for the system 10.”* The Examiner notes that assigning a Quality of Service requirement for a disk array inherently means that some form

Art Unit: 2123

of “Application” like streaming video is being contemplated by the teachings of the *Mason* reference), *modifying the design in response to said desired levels including modifying the assignments of the system resources; (Col. 2 lines 50-57, “the present invention include the ability to make changes dynamically to the data storage system while in use.”), predicting level of performance parameters for the modified design; and displaying for the user an indication of the predicted levels of performance via the user interface, (Col. 2 lines 66-67 and Col. 3 lines 1-2, “Users can easily manipulate the system settings using the GUI, including a with features such as bar graphs and scales showing real-time system settings and performance”). Please also note the passage in Col. 5 lines 32-64.*

4.2 As regards dependent claims 2, 11 and 24 the *Mason* reference discloses a “*data storage system*” (Col. 1 line 66).

4.3 As regards dependent claims 3, 14 and 26 the *Mason* reference discloses modifying parameters to a desired level of performance (Col. 2 lines 21-31).

4.4 As regards dependent claims 4, 5, 15, 16 and 27 the *Mason* reference discloses a utility function that is selected by the user (Col. 6 lines 6-12, *note that the Mason reference discloses services provided through an API which is functionally equivalent to providing utilities to monitor system and memory resources*).

4.5 As regards dependent claims 6-9, 17-22 and 28-31 the *Mason* reference discloses a GUI (Col. 2 lines 22-31), with Bar graphs and scales (Col. 2 lines 58-67 and Col. 3 lines 1-2), and an interactive real-time display of the changing system attributes via the GUI (Col. 5 lines 32-64).

Art Unit: 2123

4.6 As regards dependent claim 12 the *Mason* reference discloses assigning resources to application because, the reference discloses setting QoS levels which is an assignment of system *bandwidth* resources (Figure 3).

4.7 As regards dependent claim 13 the *Mason* reference discloses a design tool, for designing a data storage system (Col. 1 line 66 and Figure 1).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US Patent 5,668,995 discloses determining what resources are needed in a client server environment (Figure 1).
2. US Patent 6,865,527 discloses a method of determining storage system requirements (Abstract).
3. US Patent 5,640,595 discloses a GUI for determining what resources are required in a computer system (Figure 8).

5.1 Claims 1-24 and 26-31 are rejected. This Office Action is Non-Final.


5.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwain M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2123

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free):

DMC


Paul L. Rodriguez 9/13/05
Primary Examiner
Art Unit 2125